
Radioresistant
Microbes
life in the
extremes
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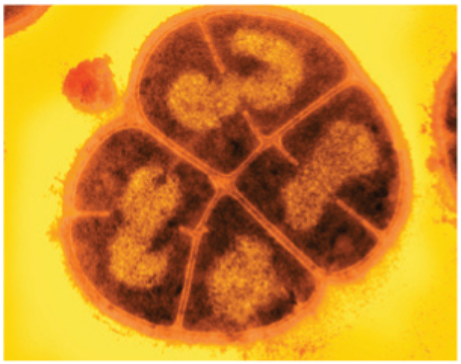

The bacterium *Deinococcus radiodurans*, shown here as a group of four cells, is resistant to drying, ultraviolet light, and immense doses of gamma rays.

EXTREME ABILITY These extremophiles consistently survive doses of radiation that are 500 times greater than the lethal dose for humans.

EXTREME ENVIRONMENTS Radioresistant fungi were found growing in the remains of the Chernobyl nuclear reactor, which was destroyed by a steam explosion in 1986. Scientists determined that the extremophile fungi were using energy from radioactivity to produce food for themselves.

EXTREME EXAMPLES *Deinococcus radiodurans* is listed in the Guinness Book of World Records as "the world's toughest bacterium." In addition to being resistant to radiation, these bacteria can also survive severe droughts, extreme cold, and strong acids.

Photo Credit: U.S. Nuclear Regulatory Commission (front); *Deinococcus radiodurans* - Michael J. Daly, Uniformed Services University (back). For more information visit http://astrobiology.nasa.gov/